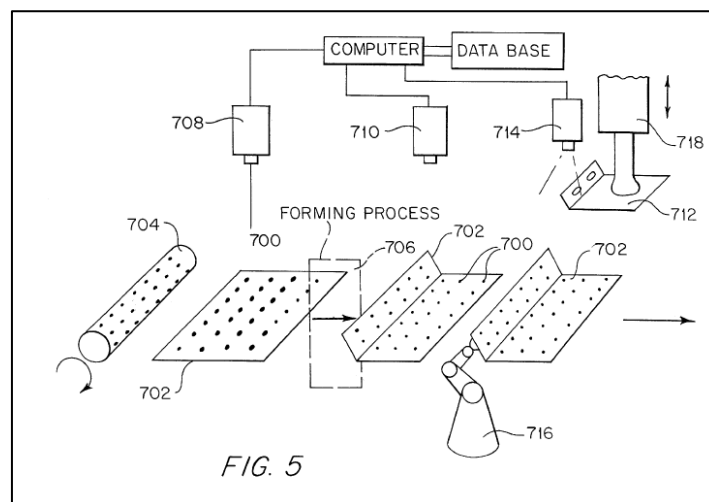


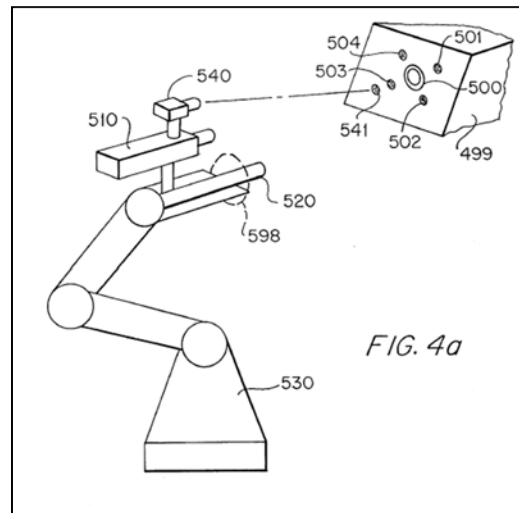
1

The '607 patent, entitled VISION TARGET BASED ASSEMBLY, describes methods and apparatuses for assembling, handling, and fabrication in which targets are used on objects. '607 Abstract. The targets are utilized so that a camera may determine the relative position of one or more parts. '607 Patent, Col. 1:64-2:3. In one embodiment, the part having targets may be held by a robot arm and the camera is separate from the robot arm. The robot is guided to handle or assemble the part. '607 2:4-7, Figure 5.

The patent includes the concept of observing targets, and storing an observed pattern of the targets as a representation of the object, without knowledge of the actual object. Figure 5 of the '607 specification demonstrates this concept. Figure 5 shows dots 700 placed on a sheet of metal 702 before a forming process. Those dots can then be observed by an electro-optical sensing means 708, 710, 714. The information about the pattern of the dots is then stored in a database. The forming operation occurs and a new pattern is sensed. Figure 5 shows that without knowledge of the sheet metal, certain information can be determined by comparison back to the original sensed pattern of dots. *See Doc. No. 142 at 2.*



In another embodiment, the camera is located on the robot arm and used to guide the robot arm to a part that has targets. '607 Patent, Figure 4a.



### **APPLICABLE LAW**

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’ *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). In claim construction, courts examine the patent’s intrinsic evidence to define the patented invention’s scope. *See id.*; *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Communications Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). This intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1314; *C.R. Bard, Inc.*, 388 F.3d at 861. Courts give claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention

in the context of the entire patent. *Phillips*, 415 F.3d at 1312-13; *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

The claims themselves provide substantial guidance in determining the meaning of particular claim terms. *Phillips*, 415 F.3d at 1314. First, a term's context in the asserted claim can be very instructive. *Id.* Other asserted or unasserted claims can also aid in determining the claim's meaning because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term's meaning. *Id.* For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id.* at 1314-15.

Claims “must be read in view of the specification, of which they are a part.” *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 978 (Fed. Cir. 1995)). “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. *Phillips*, 415 F.3d at 1316. In these situations, the inventor's lexicography governs. *Id.* Also, the specification may resolve ambiguous claim terms “where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone.” *Teleflex, Inc.*, 299 F.3d at 1325. But, “although the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Comark Communications, Inc. v. Harris Corp.*, 156 F.3d

1182, 1187 (Fed. Cir. 1998); *see also Phillips*, 415 F.3d at 1323. The prosecution history is another tool to supply the proper context for claim construction because a patent applicant may also define a term in prosecuting the patent. *Home Diagnostics, Inc., v. Lifescan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) (“As in the case of the specification, a patent applicant may define a term in prosecuting a patent.”).

Although extrinsic evidence can be useful, it is “less significant than the intrinsic record in determining ‘the legally operative meaning of claim language.’” *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc.*, 388 F.3d at 862). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id.* at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert’s conclusory, unsupported assertions as to a term’s definition is entirely unhelpful to a court. *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.*

The patents-in-suit also contain means-plus-function limitations that require construction. Where a claim limitation is expressed in means-plus-function language and does not recite definite structure in support of its function, the limitation is subject to 35 U.S.C. § 112 ¶ 6. *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997). In relevant part, 35 U.S.C. § 112(f) “mandates that such a claim limitation ‘be construed to cover the corresponding structure . . . described in the specification and equivalents thereof.’” *Id.* (quoting 35 U.S.C. § 112 ¶ 6). Accordingly, when faced with means-plus-function limitations, courts “must turn to

the written description of the patent to find the structure that corresponds to the means recited in the [limitations].” *Id.*

Construing a means-plus-function limitation involves multiple inquiries. “The first step in construing [a means-plus-function] limitation is a determination of the function of the means-plus-function limitation.” *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). Once a court has determined the limitation’s function, “[t]he next step is to determine the corresponding structure described in the specification and equivalents thereof.” *Id.* A “structure disclosed in the specification is ‘corresponding’ structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.” *Braun*, 124 F.3d at 1424.

## **CLAIM CONSTRUCTION**

### **A. ‘607 Patent Terms**

#### **1. “object”**

Motion Games proposes that no construction is necessary for this term, and the plain and ordinary meaning should control. In the alternative, Motion Games proposes that this term means “thing.” Doc. No. 142 at 12. Defendants propose “[a] part that changes in shape, form, or location over time.” Doc. No. 155 at 3. The parties disagree as to whether the claim is limited to a forming operation such as shown as shown in the Figure 5 embodiment.

Motion Games’ principal argument is that the ordinary meaning of “object” should be utilized because the patentee neither sets out a definition and acts as its own lexicographer nor disavows the full scope of a claim term either in the specification or during prosecution. Doc. No. 142 at 12 (citing *Aventis Pharm. S.A. v. Hospira, Inc.*, 675 F.3d 1324, 1330 (Fed. Cir. 2012) and *Thorner v. Sony Computer Entm’t Am. L.L.C.*, 669 F.3d 1362, 1365 (Fed. Cir. 2012)).

Motion Games opposes Defendants attempt to limit “object” to a “part that changes in shape, form, or location, over time,” by contending that its construction is consistent with customary dictionary definitions and by noting that the specification repeatedly uses “object” to refer “any physical thing.” Motion Games cites as examples the use of “object” to refer to tools (‘607 Patent, Col. 31:5-10), conveyer parts, cartons (‘607 Patent, Col. 32:66-33:7), hooks (‘607 Patent, Col. 22:45-60), something with multiple holes, studs, shafts, wheel bolts (‘607 9:24-36), and seat materials and meat (‘607 34:41-47). Motion Games further points to the ‘607 patent at column 11:35-44: “[w]hile target points...are considered here mainly in the light of formed steel stampings...and other parts, one can actually extrapolate this to all types of structures and parts.” *Id.*

Defendants argue that language in the summary of the invention and Figure 5 limits “object” to a “part” that changes in “shape, form or location over time.” First, Defendants argue that when a patent describes a feature as part of the “present invention,” the claims must be construed to include that feature. Doc. No. 155 at 3 (citing *AstraZeneca AB v. Hanmi USA, Inc.*, No. 2013-1490, 2013 WL 6670610, at \*3 (Fed. Cir. Dec. 19, 2013); *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1308 (Fed. Cir. 2007) (“When a patent thus describes the features of the ‘present invention’ as a whole, this description limits the scope of the invention.”). Defendants then cite to ‘607 patent summary which states, “In accordance with the present invention, a method for controlling an assembly process is provided in which at least one first robot holds a first part in relation to a second part. Targets are provided on at least one of the robots or the first or second part.” *Id.* (emphasis added). As such, Defendants argue that the “present invention” only refers to “parts” rather than a more generic term.

Second, Defendants cite Figure 5 and the corresponding text in the specification which discloses a “forming operation” in which the “object” is a “part” that changes in “shape, form or location over time” and the “new dimensional shape of the part 702.” *See* ‘607 Patent, Cols. 2:44-47 & 9:62-10:6). The “object” in the embodiment in Figure 5 is described as a “structure” and “formed parts.” (‘607 Patent, Col. 9:63-65). These objects are further disclosed to be “metal body panels or aircraft panels” that start as “steel blanks 702” or a “sheet of steel 702” that is “formed into a new form such as a car door or, in a more simpler case, a deck lid.” ‘607 Patent, Col. 10:7-26. Defendants argue that the Applicant clearly indicated that the disclosure that supported the claims at issue and to which these claims were directed was the embodiment shown in Figure 5 of the patent. Doc. No. 155 at 1. Defendants cite to several documents in the prosecution history that identify Figure 5 as claim support. *See id.* (citing Doc. No. 155-2, July 21, 1999 Amendment at 8; Doc. No. 155-3, May 22, 2000 Amendment at 2-3).

Motion Games replies that the claims are not limited to the teachings of Figure 5. Motion Games quotes to the relevant prosecution history and asserts that none of the relevant statements limit the claims to Figure 5. Motion Games also replies that the “present invention” statements which reference “parts” are not limiting because they are not consistent with the remainder of the specification.

Defendants misapply the Federal Circuit’s *Verizon* opinion. The courts are not to disregard contrary indications in the language of the claims simply because the summary of includes the words “present invention.” *See Plasmart Inc. v. Wincell Int’l Inc.*, No. 05 Civ. 10745(PKC), 2007 WL 3355509, at \*8 (S.D.N.Y Nov. 8, 2007). The Federal Circuit in *Verizon* used language in the specification to inform its interpretation of the claim language. *See Verizon*, 503 F.3d at 1308. The summary of the invention contained a description of critical



functions of the invention. Even though those limitations were not included in the claim, the Court read the claim term at issue to include these functional limitations in the specification. *See id.* The Court noted that when “a patent thus describes the ‘features’ of the ‘present invention’ as a whole, this description limits the scope of the invention.” *Id.* In the present case, the specification expressly rejects the notion that “objects” is limited to “parts.” *See* ‘607 Patent, Col 10:55-56 (“This concept goes well beyond formed parts, to all types of things.”). Furthermore, the independent claims of the ‘607 patent simply require the creation of a data base. The claims do not call out the changing or forming steps. As such, the Court rejects Defendants’ limitation of the “object” to “a part that changes in shape form.”

Furthermore, the Court rejects Defendants’ argument that the claims are limited to Figure 5. Defendants primarily rely on statements provided by the applicant during prosecution regarding written description support for the claims. These documents do not show a clear limitation of the claims. The September 25, 1997 Preliminary Amendment states that the claimed subject matter is disclosed “*at least* with respect to Figure 5.” Doc. No. 155-1 at 10. (emphasis added). As such, the statement implies that the disclosure is not limited to Figure 5. Additionally, the applicant’s May 22, 2000 Amendment included the language “*such as* dot targets on one inch centers.” Doc. No. 155-3 at 2 (emphasis added). Finally, the July 21, 1999 Amendment explicitly responded to a written description rejection by noting that not Figure 5 but “numerous other portions of the specification make clear that a target may be natural or artificial” and that “in view of the number of various concepts and elements disclosed in the application, it would not be possible to specifically disclose examples for all possible combinations of elements.” Doc. No. 155-2 at 8. These statements contradict Defendants’ proposal to limit this claim term or others to the Figure 5 embodiment.

Accordingly, in view of the absence of any evidence which supports limiting “object” to a “part that changes in shape, form, or location, over time,” the claim term “object” is construed as having its plain and ordinary meaning.

## **2. “pattern”**

Motion Games proposes that “pattern” should be construed as an “arrangement or configuration.” Doc. No. 142 at 9. Defendants propose “a regularly repeated arrangement or configuration that corresponds to only one form of one object.” Doc. No. 155 at 9. The parties dispute whether the pattern must be “regularly repeated” and whether a pattern must “correspond[] to only one form of one object.”

Motion Games argues that a pattern may be “random,” and not rigidly arranged. Doc. No. 142 at 9. The plaintiff references the prosecution history which states, “This pattern may be known (targets dots on one inch centers) or unknown (*for example applied to the object at random locations*).” Prosecution History at Amendment May 22, 2000 (Doc. No. 155-3 at 3)) (emphasis added). Second, Motion Games argues that the plain language of independent Claims 1 and 25 contradicts the argument that “pattern” should be construed as “regularly repeated.” The claim language states, “at least a first and second discrete targets thereon in a pattern.” ‘607 Patent, Col. 39:61. Motion Games notes that two targets alone cannot make up a “regularly repeated” arrangement or configuration. As such, the plain language of independent Claims 1 and 2 contradicts the argument that “pattern” should be construed as “regularly repeated.” Doc. No. 142 at 9.

Defendants argue that “pattern” should be construed to include “regularly repeated” because it is consistent with the ordinary meaning of the term pattern and the prosecution history and specification permits for targets to be arranged in a random pattern on the object but can also

be “regularly repeated.” Defendants also argue that “pattern” should be construed to include “corresponds to only one form of one object.” Defendants cite to language used during prosecution that stated a “new pattern” is formed after a “forming operation” where the “object has been elongated.” Doc. No. 155 at 9 (citing Doc. No. 155-3 at 3-4). As such, Defendants argue that “pattern” only correspond to one form of an object because after a change in the object, the prosecution language states that a new, different pattern exists. Defendants argue that Figure 5 confirms this construction because the pattern in Figure 5 changes after the object changes.

As noted above, the Court finds that the claims are not limited to Figure 5 and a “forming operation.” *See supra* Part A.1. Furthermore, the claim language, “at least first and second discrete targets thereon in a pattern,” contemplates a pattern that could be comprised of only two targets. As such, Defendant’s construction of “regularly repeated” contradicts the claim language. Furthermore, Figure 4a directly contradicts Defendant assertion that a new pattern must be formed after an object changes shape, form, or location. In Figure 4a, after the pin is inserted into the object, the pattern of targets is not altered. ’607 Patent, Figure 4a. Accordingly, the Court construes “pattern” to mean “arrangement or configuration.”

### **3. “sensed pattern”**

Motion Games proposes “the two-dimensional arrangement or configuration of said first and second targets as observed by the electro-optical sensing means.” Defendants propose “the physical arrangement or configuration in three-dimensional space of said first and second targets on the physical object.” The dispute is whether the sensed pattern must be what exists in the real world or whether the sensed pattern may be the sensed two-dimensional pattern observed

through the “electro-optical sensing means.” The parties also dispute whether the targets need to be in two-dimensional or three-dimensional space.

The prosecution history and specification teach that a “sensed pattern” is what is detected, rather than the object that exists in the real world. The prosecution history teaches the sensed pattern “need not be related or correlated back to the object.” *See* Doc. No. 142-2 at 3-4 (“In the present invention, an object is provided with at least first and second targets thereon which are in a pattern. . . . Whatever the pattern, it is this pattern which is then sensed electro-optically, and this sensed pattern then becomes a data base for the object.”). Furthermore, the specification indicates that the targets on the object are the pattern, that pattern is sensed electro-optically, and the “sensed pattern” is what is detected rather than the pattern that exists in the real world. *See* ‘607 Patent, Cols. 8:49-57, 9:62-10:31, 12:1-17, 12:43-48, 23:65-24:21 and 25:49-57.

The second issue is whether to import a three-dimensional limitation into the claims and this claim term. Defendants argue that the construction must include a three-dimensional limitation because there “is no embodiment in the patent for the invention where you have two targets of sensed pattern creating a database in anything other than three dimensions.” Recording of May 15, 2014 Markman Hearing at 9:35:56 (hereinafter “Hr’g”). Defendants also assert that the applicant limited the invention to sensing target locations in three dimensions. Finally, Defendants assert that the “sensed pattern” must exist in three-dimensional space because one would have to know the configuration in three-dimensional space in order to track changes or handle the object for real world objects that change shape, form or location. The Defendants provide no support for this third argument.

Motion Games asserts that the Defendants' contention that construction requiring data in "three dimensional space" is "inconsistent with the plain language of the claims and the specification, and is wrong as a technical matter." Doc. No. 142 at 7. First, Motion Games asserts that the claims of '607 patent are broad enough to cover both two-dimensional data bases and three-dimensional data bases. Second, Motion Games argues, that although dependent claims 21 and 45 claim the creation of a data base of a three-dimensional pattern, the independent claims address the two-dimensional data bases. Motion Games further argues that both Figure 4a and Figure 8 can be practiced in two dimensions and that there is no requirement that they be practiced in three dimensions. Furthermore, Motion Games argues that Defendants are unable to identify language in the specification that would limit the claim scope to three dimensions.

"[A]bsent a clear disavowal or contrary definition in the specification or the prosecution history, the patentee is entitled to the full scope of its claim language." *August Tech. Corp. v. Camtek, Ltd.*, 655 F.3d 1278, 1286 (Fed. Cir. 2011) (citing *Home Diagnostics, Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1358 (Fed. Cir. 2004)). Defendants have not provided evidence of a clear disavowal or contrary definition in the specification or the prosecution history to limit the claim scope. Rather, the specification and prosecution history indicate that importing a three-dimensional limitation into the claims is inappropriate. For instance, Figure 8 shows a system that uses a matrix array to create a data base of two-dimensional information of an object. *See* Doc. No. 142-1 at Figure 8 & Col. 22:11-13 ("It will be readily apparent that the matrix array in FIG. 8 provides positional information in the x and y directions in the plane of the drawing."). Importantly, the description of Figure 8 also teaches a second electro optical sensor *if desired*, may readily provide information concerning position in the z axis." *Id.* at Col. 22:20-24 ("Thus,

a further linear photodetector array...would provide a signal indicative of the position of hook 1014, and thus item 1010 if desired, in the "z" axis . . . .") (emphasis added). Additionally, the description of Figure 7 references using a two-dimensional pattern to identify a properly formed part. (*See id.* at Col. 10:29-31 ("one can actually roll coat down a series of dots [or] other target points which make a square pattern when optimally formed.")).

As a technical matter, limiting the construction to three-dimensional data bases would seem to require some type of three-dimensional camera. However, the specification seemingly contemplates a two-dimensional camera. *See* '607 Patent, Col. 22:11-13 ("FIG 8 provides positional information in the x and y directions in the plane of the drawing."). And, the Defendants admitted that the '607 patent does not include the concept of a three-dimensional camera. Hr'g at 9:32:10. Furthermore, Defendants again rely on limiting the claim to Figure 5. Yet, even in Figure 5 there does not seem to be a disclosure in the specification that the cameras in question are three-dimensional. It appears that the "sensed pattern" is two dimensional, and then through mathematical analysis, the sensed pattern is converted to three-dimensional information. *See* Doc. No. 142-1 at Col. 39:36-40. Finally, during prosecution of the '607 patent, in the May 22 '607 office action response, it was explained that "[the] pattern [of targets] may be... unknown (for example applied to the object at random locations)," and that the data base is formed "without reference to or knowledge of the object." Doc. No. 142-2 at 3. As such, the Court rejects Defendants import of a three-dimensional limitation into the claims.

Accordingly, the Court construes "sensed pattern" as "the arrangement or configuration of said first and second targets as observed by the electro-optical sensing means."

#### 4. “creating a data base of said object” and “creating a data base for an object”

Motion Games proposes “storing as data a sensed pattern representative of a physical object without reference to or knowledge of the object itself.” Defendants propose “storing as data the physical arrangement or configuration in three dimensional space of said first and second targets on the physical object, such that there is no correlation of the targets to the objects.” Motion Games objects to the “three dimensional” and “no correlation of the targets to the object” limitations added by the Defendants.

The parties’ arguments regarding Defendants’ proposal to limit this term to “three dimensional space” are similar to those discussed above for “sensed pattern.” For the reasons described above, the Court rejects the three dimensional limitation.

Motion Games objects to the “no correlation of the targets to the object” limitation proposed by the Defendants. In their proposed constructions, both Motion Games and Defendants include the concept of the knowledge of the targets being independent of any knowledge of the object. Both parties find support in the file history for their proposed constructions. Motion Games refers to the statement in the May 22, 2000 Amendment, “This pattern data base can then be used in a number of ways, such as to handle the object or to track changes made to the object, all *without reference to or knowledge of the physical object itself.*” Doc. No. 142-2 at 3-4 (emphasis added). Defendants also reference a statement in the May 22, 2000 Amendment:

The suggested data base that the Examiner proposes would be obvious from the Bales paper is one which merely correlates targets to the object, while in the present invention there is no such correlation ... *[r]ather it is the pattern itself which now stands for the object and which is used regardless of a correlation to the actual object*, and which is neither disclosed nor made obvious by the Bales paper.

*Id.* at 4 (emphasis added).

Motion Games’ construction appears to be more consistent with the context of the May 2000 Amendment. Furthermore, the use of “correlate” in Defendants’ construction may require further construction and may ultimately be construed as something similar to Motion Games’ proposed construction. Accordingly, the Court construes “creating a data base of said object” and “creating a data base for an object” to mean “storing as data a sensed pattern representative of a physical object without reference to or knowledge of the object itself.”<sup>2</sup>

## 5. “target”

Motion Games proposes that no construction is necessary for this term and the plain and ordinary meaning should control. In the alternative, Motion Games proposes “[a] feature or group of features of or on an object.” Doc. No. 142 at 14. Defendants propose “a detectable mark, shape, or light source on the surface of the object and that changes location in space as the physical object changes.” Doc. No. 155 at 11.

The parties dispute 1) whether a feature of the object can be a target, 2) whether targets must be on the surface of the object, and 3) whether the targets must change location in space as the object changes.

First, the specification as a whole makes clear that a feature of the object may be a target. The specification states, “[t]he targets can be specifically applied to the object, *or can be an otherwise normal feature of the object.*” ‘607 Patent, Abstract (emphasis added). “Targets can be holes, corners or other easily determined natural part features;” such as “a serial plate . . . with

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<sup>2</sup> At the hearing, Defendants were amenable to the Court’s construction if the Court adopted Defendants’ construction for “sensed pattern.” Hr’g at 1:04:18. As noted above, the Court rejected Defendants’ proposed construction.



print markings; a logo; a bolt head,” “a bar code marker,” or “flashing LEDs.” *Id.* at 1:57-58, 8:64-9:1, 16:38-41 & 24:4-7. As such, the specification indicates that the targets may be either artificial or a feature of the object. Therefore, a construction excluding “features” is improper.

Second, the specification also makes clear that targets are not limited to the “surface” of an object. It expressly states that a fiber optic target “can be buried such that it could not normally be seen under visible light but that infra red radiation . . . emanating from the fiber outward through the glass or plastic could be seen.” ‘607 27:30-34. Therefore, a construction limiting “target” to the “surface of the object” is improper.<sup>3</sup>

Third, as to whether the targets must change location in space as the objects change, Defendants rely on the argument that the claims are limited to the Figure 5 embodiment. As discussed above, the Court does not agree with limiting the patent to the Figure 5 embodiment. Motion Games rightly points to Figure 4a which discloses using a camera on a moving robot arm to observe stationary targets as a guide for controlling the movement on the arm. The targets in that example do not move. As such, Defendants’ proposed limitation is rejected.

Accordingly, the Court gives the term “target” its plain and ordinary meaning.

## **6. “processing means”**

Motion Games proposes “[n]o construction needed as the term should not be governed by §112(6), and the plain and ordinary meaning should apply.” In the alternative, Motion Games proposes with respect to structure, “a computer (and equivalents).” Doc. No. 142 at 17-18. With respect to function, Motion Games proposes “creating a database of the object.” Doc. No. 155 at 12. Defendants argue that this term should be governed by 35 U.S.C. §112(6). With respect to

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<sup>3</sup> Defendants assert that in prosecution the reference to “physical feature” was removed from the claims. However, when the Amendment and its corresponding arguments are read together in context, it is clear that targets may be artificial or natural (natural being a feature of the object). *See* Doc. No. 155-2 at 8.

structure, Defendants propose “a computer with data storage running software.” With respect to function, Defendants propose, “creating a data base for an object using said sensed pattern of said first target and said second target.”<sup>4</sup>

Motion Games argues that “processing means” is understood in the art to mean a computer such as a microprocessor or the like, which performs the general operation of creating a database. Motion Games cites *Data General Corp. v. Int’l Bus. Machines Corp.*, 93 F. Supp. 2d 89, 96-97 (D. Mass. 2000) where the term “processor means” was found not to be subject to means-plus-function analysis because one skilled in the art would understand a “processor” to encompass a general-purpose structure that could perform all general purpose functions described in the claim. *Id.* Defendants respond by arguing that Motion Games cites no intrinsic or extrinsic evidence to prove that “processing means” is understood in the art to mean a computer. Motion Games contends that processing means is sufficient structure where, as here, the claimed function can be achieved by any general purpose computer, without special programming.” REPLY at 7 (citing *In re Katz Interactive Call Processing Patent Litigation*, 639 F.3d 1303, 1316 (Fed. Cir. 2011)).

“In determining whether to apply the statutory procedures of section 112, ¶ 6, the use of the word ‘means’ triggers a presumption that the inventor used this term advisedly to invoke the statutory mandates for means-plus-function clauses.” *York Products, Inc. v. Central Tractor Farm & Family Center*, 99 F.3d 1568, 1574 (Fed.Cir.1996) (citation omitted). This presumption may be overcome when the claim recites the word “means’ but does not recite a corresponding function for the means, or when the claim recites a function but contains sufficient structure

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<sup>4</sup> At the May 15 hearing Motion Games disputed whether the term was a means-plus-function term, but acknowledged that if the §112(6) applied the Court’s construction was correct. Hr’g at 10:16:00.

within the claim itself to perform entirely the recited function. *See id.*; *Cole v. Kimerly-Clark Corp.*, 102 F.3d 524, 527 (Fed. Cir. 1996). Motion Games has failed to provide evidence that “processing means” has “an understood meaning in the art” that connotes structure, or that it is “used in common parlance or by persons of skill in the pertinent art to designate structure.” *See Aspex Eyewear, Inc. v. Altair Eyewear, Inc.*, 288 F. App’x 697, 703 (Fed. Cir. 2008) (citations omitted). Furthermore, although Motion Games asserts that no special programming of a computer would be necessary, the intrinsic record indicates that special programming of the computer is required. *See* April 1, 1998 Amendment, Doc. No. 155-4 at 12 (“the actual software necessary to create such a data base is well within the skill of an ordinary programmer. First, the location of the targets is determined through the use of well known equations such as those disclosed in U.S. Patent no. 4,219,847, to Pinkney et al.”) Accordingly, the Court construes “processing means” as a means-plus-function term.

Regarding function, “[t]he court must construe the function of a means-plus-function limitation to include the limitations contained in the claim language, and only those limitations. *Cardiac Pacemakers, Inc. v. St. Jude Medical, Inc.*, 296 F.3d 1106, 1113 (Fed. Cir. 2002). As such, the function is: “creating a data base of said object using said sensed pattern of said first target and said second target.” ‘607 Patent, Col. 39:66-40:1.

Regarding structure, when the corresponding structure is a computer, the specification must disclose an algorithm to perform the claimed function.

Because general purpose computers can be programmed to perform very different tasks in very different ways, simply disclosing a computer as the structure designated to perform a particular function does not limit the scope of the claim to “the corresponding structure, material, or acts” that perform the function as required by section 112 paragraph 6.

*Aristocrat Techs. Austl. Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008); *see also*, *WMS Gaming, Inc. v. International Game Technology*, 184 F.3d 1339 (Fed. Cir. 1999). As such, Motion Games' proposed construction of a "computer" fails to provide an algorithm used to perform the recited function. *See In re Katz*, 639 F.3d at 1314. Drawing from the specification, the Court construes the structure as "a computer programmed with the use of well known photogrammetric equations, to determine the location of the targets, and equivalents." *See* '607 Patent, Cols. 24:15-18, 4:24-27, 5:5-12, 24:62-65, 37:58-61.

## **7. "electro-optical sensing means"**

The parties dispute whether the term is a means-plus-function limitation and, if so, the proper function and structure. Motion Games proposes, "[n]o construction needed as the term should not be governed by §112(6), and the plain and ordinary meaning should apply." In the alternative, Motion Games proposes, with respect to function, "[o]bserving targets on the object." Doc. No. 142 at 19-20.

In the alternative, with respect to structure Motion Games proposes:

A device capable of capturing light (including IR and Ultraviolet) and converting it to electrical signals and/or computer files, including electro- optical sensing units, TV cameras, including solid state, and those that can detect IR and/or UV ; Vidicons, image dissectors, linear arrays and the like, mechanically scanned laser beams, like a flying spot scanner; Raster scan cameras; linear or matrix camera units; image scanning photo detector camera arrays and solid state TV (matrix array) cameras, other TV cameras, scanning laser beams, fixed detectors optimized for a preferred target signature, continuous or quadrant position detectors (such as UDT SC- 10's); light detectors including a scanning matrix photo detector camera comprising a lens and a detector array comprised by a plurality of horizontal rows of discrete photo diodes; linear photodetector array; and equivalents.

Defendants argue that this claim term should be governed by 35 U.S.C. § 112(6). Defendants propose, with respect to function, "[s]ensing the location in space of said first and

second targets in a pattern on the physical object.” Doc. No. 155 at 14-15. Defendants propose, with respect to structure:

A TV camera or TV cameras such as a solid state TV camera or TV cameras or vidicons, image detectors, linear arrays and the like in combination with the use of well known photogrammetric equations such as those disclosed in U.S. Patent No. 4,219, 847, to Pinkney et al to determine the location of the targets in space.

Doc. No. 155 at 15.

Motion Games asserts that one skilled in the art would know what structure is referenced by “electro-optical sensing means” and, therefore, the term need not be construed nor is it governed as a means-plus-function term. However, Motion Games has failed to put forward sufficient evidence to overturn the presumption that an “electro-optical sensing means” invokes Section 112, paragraph 6. *See York Products*, 99 F.3d at 1574; *Cole*, 102 F.3d at 527.

With regards to function, no argument has been presented to justify deviating from the claim language. Accordingly, the Court, following the language in claim 1 of the ‘607 patent, construes the function as, “sensing the pattern of said first target and said second target.” *See* ‘607 Patent, Col. 39:63-65.

The structure in question is the sensing means, or cameras. Defendants again rely on limiting the claims to the embodiment of Figure 5 and import a three dimensional limitation. As discussed above, the Court rejects such a limitation. Furthermore, Defendants’ proposal limits the sensor to the particular algorithms of equations used on the data collected. Such a limitation would be more appropriate for the “processing means” term above, rather than for the sensing means. As such, Defendants’ proposed construction is too narrow. Accordingly, the structure of the “sensing means,” as disclosed in the specification, is:

TV cameras, including solid state, and those that can detect IR and/or UV;  
Vidicons, image dissectors, linear arrays and the like, mechanically scanned laser

beams, like a flying spot scanner; Raster scan cameras; linear or matrix camera units; image scanning photo detector camera arrays and solid state TV (matrix array) cameras, scanning laser beams, fixed detectors optimized for a preferred target signature, continuous or quadrant position detectors (such as UDT SC-10's); light detectors including a scanning matrix photo detector camera comprising a lens and a detector array comprised by a plurality of horizontal rows of discrete photo diodes; linear photodetector array; and equivalents.

*See* '607 Patent, Col. 13:24-31, 17:22-23, 20:20, 21:53-56, 22:20-22 36:22-30.

#### **8. “means for illuminating” (claim 39)**

The parties agree “means for illuminating” is a means-plus-function term that should be governed by 35 U.S.C. §112(6).

With respect to structure, Motion Games proposes, “a light source such as one or more LEDs, infrared LEDs, diode lasers, Xenon light, color filters, or fiber optic, as well as any light source that generates light applied to a reflective surface, such as retro-reflective, plastic prismatic retroreflectors, retro-reflective tape, rectilinear material and the like, and equivalents.” Doc. No. 142 at 17 (citing '607 Patent, Col. 24:4-7; 33:45-57; 35:19-32 & 25:34-38).

With respect to function, Motion Games proposes: “illuminating one or more of the targets.” *Id.*

With respect to structure, Defendants propose:

a light source such as a LED, infra-red LED, diode laser, Xenon light, color filter or fiber optic such as those disclosed at Col. 33:45-57 and 35:19-32, as well as a light source that generates light applied to a reflective surface, such as retro-reflective, plastic prismatic retroreflectors, retro-reflective tape, lectilinear material and the like, such as those disclosed at '607 patent, Col. 25:34-38, and known equivalents.

Doc. No. 155 at 17. With respect to function, Defendants propose: “illuminating said one of first and second targets.” *Id.*

Regarding function, neither party has justified deviating from the claim language. As such, the function is “illuminating one of said first and second targets.” ‘607 Patent, Col. 42:28-29. However, Defendants’ briefing indicates that it reads such a construction as limiting the scope of the claim to only a single illuminated target. This construction is improperly narrow. Motion Games argument that the function should be construed as “at least one” target is more appropriate. The specification on multiple occasions discloses the use of multiple illuminated targets. *See, e.g.*, Doc. No. 142-1 at Col. 26:35-39, 33:52-57. Thus, the Court rejects Defendants’ argument that “one of” be construed as “only one” target.

The primary dispute with regard to structure is whether “means for illuminating” covers multiple sources of light or, as Defendants propose, only a single source of light. Motion Games identifies multiple instances where the specification discloses the use of multiple illuminated targets. Doc. No. 142 at 17 (citing ‘607 Patent, Col. 24:4-7; 33:45-57; 35:19-32 & 25:34-38). Defendants argue that the specification discloses a one-to-one correspondence between the “targets” and “infra red LEDs” such that each target is an LED, and, therefore, targets are referred to as LEDs. Doc. No. 155 at 18. Defendants assert, citing Figure 12A, that a single fiber or bundle of fibers make up just one “target end,” and, therefore, the bundles of fiber becomes a single point of light. Motion Games rightly replies, that “[e]ven though the fibers may be close to one another, each fiber is still an individual light source.” Doc No. 161 at 8.

The specification clearly discloses that a single target can be illuminated by multiple light sources. The specification on multiple occasions discloses using multiple fiber optic cables to form a bundle and teaches using multiple LEDs. *See, e.g.*, ‘607 Patent, Col. 26:35-39 (“Indeed, one might even think of the fibers 1370 to 1373 as bundles of fibers. Indeed different numbers or arrangements of fibers and different arrangements of the target ends 1360 to 1363 could be

used...”); *Id.* at Col. 33:52-57 (“For example... if all targets are infra red emitting such as infra red LEDs, then... the camera [can] show[] primarily the infra red targets superposed thereon.”). Furthermore, the specification references light sources illuminating targets without any restrictive language which would support Defendants’ proposed one-to-one correspondence. Thus, the use of “light sources” for illuminating “targets” need not be limited as asserted by Defendants.

Accordingly, the Court construes “means for illuminating” as follows: the function is “illuminating one of said first and second targets;” the structure is:

a light source such as one or more LEDs, infrared LEDs, diode lasers, Xenon light, color filters, or fiber optic, as well as any light source that generates light applied to a reflective surface, such as retro-reflective, plastic prismatic retroreflectors, retro-reflective tape, rectilinear material and the like, and equivalents.

*See* ‘607 Patent, Cols. 24:4-7, 33:45-57, 35:19-32, 25:34-38.

### **CONCLUSION**

For the foregoing reasons, the Court interprets the claim language in this case in the manner set forth above. For ease of reference, the Court’s claim interpretations are set forth in a table attached to this opinion.

**So ORDERED and SIGNED this 16th day of January, 2015.**

  
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JOHN D. LOVE  
UNITED STATES MAGISTRATE JUDGE



## APPENDIX A

Claim Term	Construction
<b>U.S. Patent 6,167,607</b>	
“object”	Plain and ordinary meaning
“pattern”	Arrangement or configuration
“sensed pattern”	The arrangement or configuration of said first and second targets as observed by the electro-optical sensing means
“creating a data base of an object” and “creating a data base for an object”	Storing as data a sensed pattern representative of a physical object without reference to or knowledge of the object itself
“target”	Plain and ordinary meaning.
“processing means”	<p><b>Structure:</b> “a computer programmed with the use of well known photogrammetric equations, to determine the location of the targets, and equivalents”</p> <p><b>Function:</b> “creating a data base of said object using said sensed pattern of said first target and said second target”</p>
“electro-optical sensing means”	<p><b>Structure:</b> “TV cameras, including solid state, and those that can detect IR and/or UV ; Vidicons, image dissectors, linear arrays and the like, mechanically scanned laser beams, like a flying spot scanner; Raster scan cameras; linear or matrix camera units; image scanning photo detector camera arrays and solid state TV (matrix array) cameras, scanning laser beams, fixed detectors optimized for a preferred target signature, continuous or quadrant position detectors (such as UDT SC- 10's); light detectors including a scanning matrix photo detector camera comprising a lens and a detector array comprised by a plurality of</p>

Claim Term	Construction
	<p>horizontal rows of discrete photo diodes; linear photodetector array; and equivalents.”</p> <p><b>Function:</b> “sensing the pattern of said first target and said second target”</p>
<p>“means for illuminating”</p>	<p><b>Structure:</b> a light source such as one or more LEDs, infrared LEDs, diode lasers, Xenon light, color filters, or fiber optic, as well as any light source that generates light applied to a reflective surface, such as retro-reflective, plastic prismatic retroreflectors, retro-reflective tape, rectilinear material and the like, and equivalents. (See ‘607 patent at Col: 24: 4-7; Col. 33:45-57; Col. 35:19-32; Col. 25:34-38.)</p> <p><b>Function:</b> “illuminating one of said first and second targets”</p>